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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,390	04/02/2001	Norihiko Kanae	109106	9343

25944 7590 11/18/2002

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EXAMINER

TRAN, HENRY N

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/828,390

Applicant(s)

KANAE ET AL.

Examiner

HENRY N. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 26 August 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13. 6) ☐ Other: _____

DETAILED ACTION

This Office action is in response to the applicant's amendment filed 08/26/02 (Paper No. 11). The amendments to the claims and applicant's remarks were considered, with the results set forth as following.

Claims 1-8 are pending in this application.

Information Disclosure Statement

1. The examiner has considered the references listed in the information disclosure statement (IDS) filed 08/26/02 (Paper No. 13) (see attached form PTO-1449).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert et al (U.S. Patent 6,252,564, hereinafter referred to as "Albert") in view of Morita et al (U.S. Patent 6,400,492, hereinafter referred to as "Morita").
4. Regarding claims 1, 3 and 7, Albert teaches an electrophoretic display device 40 comprising: a conductive film 44 formed on a substrate layer 42; a microcapsule layer 46 (a display media 46) having a plurality of microcapsules 50 and a binder 52 affixing the plurality of microcapsules 50 therein, each of the plurality of microcapsules 50 containing a liquid dispersion medium and electrophoretic particles (Albert says that the optoelectrically active components 50

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is an encapsulated electrophoretic display material comprising a liquid dispersion medium and electrophoretic particles); and a resin layer 48 (an adhesive layer 48), the microcapsule layer 46 being positioned between (or being in contact with both of) the conductive film 44 and the resin layer 48 (see FIG. 5A, col. 12, lines 14-38). However, Albert does not teach expressly that: (i) the resin layer 48 including at least urethane resin, and (ii) the resin layer is formed in a thickness of 20 to 200 μ m. Morita teaches an electrophoretic display device including a resin layer 8 (an overcoat layer 8) positioned in the place of the substrate 1 having the thickness from about 10 μ m to about 5mm, and the materials for use in the overcoat layer 8 including a polyurethane (see figures 2D and 6B; col. 15, line 44 to col. 16, line 2; col. 18, line 56 to col. 19, line 4; col. 20, lines 45-49; and col. 21, lines 30-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the resin layer 8 as taught by Morita for the resin layer 48 of Albert because this would enhance the functionality and reliability of the electrophoretic display device by having an overcoat layer 8 acting a protective cover substrate 1 (see Morita, col. 19, lines 5-8). Claims 1, 3 and 7 are rejected by the rationale discussed above.

5. Regarding claims 2, 4 and 5, Albert further teaches that the conductive film 44 is an optically transmissive electrode 44 (claim 4) (see references recited above). Morita further teaches that the resin layer 8 is made from suitable materials selected from the group consisting of acrylic-based resin (acrylic resin) and olefin-based resin (polyolefin) (see references recited above); and polyurethane is a water-soluble urethane resin (claims 2 and 5). Claims 2, 4 and 5 are dependent upon claim 1, and are rejected on the same reasons set forth in claim 1, and by the reasons noted above.

Allowable Subject Matter

6. The indicated allowability of claim 3 is withdrawn in view of the newly discovered reference to Morita. Rejections based on the newly cited reference above.

7. Claim 8 is allowed.

8. Claim 6 is objected to as being dependent upon a rejected claim 5, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to an electrophoretic display device. The independent claim 8 identifies the uniquely distinct features "the resin layer (18) whose molecular weight is between 5000 to 2,000,000". The closest prior art, Albert et al (US 6,252,564) and Morita et al (US 6,400,492) disclose conventional electrophoretic display devices, either singularly or in combination, fails to anticipate or render the above underlined limitations in combination with other claimed limitations obvious.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are:

- Albert (U.S. Patent 6,392,786) teaches an electrophoretic display device including spacers; and
- Loxley et al (U.S. Patent 6,262,833) teach a method and materials for fabricating encapsulated electrophoretic displayed elements.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY N. TRAN whose telephone number is (703) 308-8410. The examiner can normally be reached on Mon - Fri from 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD A. HJERPE, can be reached at (703) 305-4709.

Any response to this action should be mailed to:

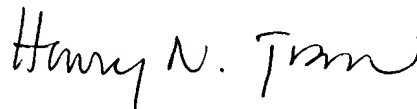
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or faxed to:

(703) 872-9314 (for technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office Whose telephone number is (703) 306-0377.



HENRY N. TRAN
Examiner
Art Unit 2674